



AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE

A PRACTICE COMMITTEE REPORT

A Committee Opinion

GUIDELINES ON NUMBER OF EMBRYOS TRANSFERRED

(REVISED AND AMENDED NOVEMBER 1999)

Although multiple gestation (particularly when associated with triplet and higher order pregnancy) is more often a consequence of super-ovulation therapy it is also an undesirable consequence of the assisted reproductive technologies (ART). Multiple gestation leads to an increased risk of complications in both the fetuses and the mother.

Although multifetal pregnancy reduction is possible to reduce fetal number, its use does not completely eliminate associated risks of multiple pregnancy and may result in the loss of all fetuses and have adverse psychological consequences for patients. In addition, its use is not acceptable to some patients. Thus, reducing the number of multiple gestations produced by the assisted reproductive technologies is an essential goal for ART programs and their patients. These guidelines are intended to assist programs and their patients in determining the appropriate number of embryos to transfer. Strict limitations, such as a maximum replacement of three embryos as required by law in some countries, do not allow individual variation according to each patient's circumstance. These guidelines may be varied according to individual clinical conditions, such as patient age, embryo quality, cryopreservation opportunities, and as clinical data is accumulated with newer techniques.

- I. Individual programs are encouraged to generate and use their own data regarding patient characteristics and the number of embryos to be transferred.
- II. The number of embryos transferred should be agreed upon by the physician and the treated patient(s), informed consent documents completed, and the information recorded in the clinical record. In the absence of data generated by the individual program, the following guidelines are recommended:
 - A. In patients with the most favorable prognosis usually no more than two good quality embryos should be transferred. Although groups of patients with such a favorable prognosis may be identified, current technology cannot identify individual patients whose embryos have enhanced implantation potential, and who are therefore at the greatest risk for high order multiple gestation when multiple embryos are transferred. Favorable prognosis factors include ova derived from women under the age of 35, those with embryos of sufficient quality and quantity for cryopreservation, and improved embryo quality as judged by morphologic features.

*A **Committee Opinion** offers consensus-based (or evidence-based when there is sufficient evidence available) guidance relative to a given practice activity. This guidance, in addition to scientific and clinical information, may take into account issues of ethical and financial concerns.*

- B. In patients with above average prognosis (e.g., female partner under age 35 without cryopreserved embryos) usually no more than three good quality embryos should be transferred.
- C. In patients with an average prognosis (e.g., female partner age 35-40) usually no more than four good quality embryos should be transferred.
- D. In patients with below average prognosis, (e.g., female partner age greater than 40 or multiple failed cycles), usually no more than five good quality embryos should be transferred.
- E. In donor egg cycles, the age of the donor should be used in determining the number of embryos to transfer.

III. Since all oocytes may not fertilize when GIFT is performed, one more oocyte than embryo may be transferred for each prognostic category.

REFERENCES

Medical Research International and the Society for Assisted Reproductive Technology, The American Fertility Society. In vitro fertilization/embryo transfer in the United States: 1987 results from the National IVF-ET Registry. *Fertil Steril.* 1989;51:13-19.

Qasim SM, Karacan M, Corsan GH, Shelden R, Kemmann E. High-order oocyte transfer in gamete intrafallopian transfer patients 40 or more years of age. *Fertil Steril.* 1995; 64:107-110.

Widra EA, Gindoff PR, Smotrich DB, Stillman RJ. Achieving multiple-order embryo transfer identifies women over 40 years of age with improved in vitro fertilization outcome. *Fertil Steril.* 1996; 65:103-108.

Staessen C, Janssenwillen C, Vanden Abbeel E, Devroey P, Van Steirteghem AC. Avoidance of triplet pregnancies by elective transfer of two good quality embryos. *Hum Reprod.* 1993;8:1650-1653.

Balen AH, MacDougall J, Tan SL. The influence of the number of embryos transferred in 1,060 in vitro fertilization pregnancies on miscarriage rates and pregnancy outcome. *Hum Reprod.* 1993;8:1324-1328.

Schieve, LA, Peterson, HB, Meikle S, Jeng G, Danel I, Burnett NM, Wilcox LS. An Evaluation of the Multiple-Birth Risk Associated With In Vitro Fertilization in the United States. *JAMA.* 1999;282(19):1832-1838.

This Practice Committee Report has been developed with the assistance of the Society for Assisted Reproductive Technology. Accepted by the Practice Committee of the American Society for Reproductive Medicine, September 1999, and approved by the Board of Directors of the American Society for Reproductive Medicine, October 1999.

